

# Performance Track Leading Practices

## DENSO Manufacturing Michigan Improves its Transportation Footprint through EPA's SmartWay Partnership

### Costs and Benefits of Joining the SmartWay Partnership

Costs*	Savings and Other Benefits
Minimal implementation cost—data tracking, communicating with carriers, improving site operations to focus on fuel efficiency.  Nominal time investment to collect and manage transportation data.  *as of Jan. 2009	Reduces operating cost from transportation efficiencies and lower fuel demands.  Extends footprint tracking to transportation operations.  Provides technical assistance to help quantify transportation emissions.  Links facilities to leading "green" carriers—fuel efficiency translates into competitive advantages.

### PERFORMANCE TRACK FACILITY

DENSO Manufacturing Michigan Inc.,  
Battle Creek, Michigan

### GOAL CATEGORY

Air Emissions

### RELATED INDICATORS

Nonproduct Outputs: Total Greenhouse Gas Emissions

### OVERVIEW

DENSO Manufacturing Michigan (DMMI) designs and produces automotive heating and cooling components and systems. As a Charter Member of Performance Track since 2001, DMMI has taken advantage of the program to pursue new and creative ways to align its operations with DENSO Group's global environmental initiative, EcoVision 2015.

DMMI's goal for EcoVision 2015 is to reduce normalized carbon dioxide (CO<sub>2</sub>) emissions by 18 percent by 2010. To achieve this goal, DMMI is implementing a broad program of building-specific emission reduction initiatives. In addition, DENSO analyzes its transportation footprint to find opportunities to reduce greenhouse gas (GHG) emissions.

DMMI has partnered with EPA through the SmartWay Transport Partnership, which helps facilities measure transportation-related emissions and make tangible progress to improve upstream and downstream environmental performance by using carriers with improved fuel efficiency standards. Facilities also contribute to SmartWay by implementing best practices across transportation operations. DMMI joined SmartWay in 2005 and continues to refine its transportation strategy, with 72 percent of its product mileage coming from SmartWay certified carriers as of 2009.

### THE EPA SMARTWAY PARTNERSHIP

Any company that ships or receives items delivered by truck or rail transport is eligible to participate in SmartWay. As a shipper partner, facilities must assess their transportation operations and commit to improving facility transportation emissions within three years—their goal is to ship at least 50 percent of goods using SmartWay transport carriers. DMMI works directly with its staff and with its network of freight carriers to reduce fuel use. Information related to transport operations is managed using the FLEET tool, an Excel-based tool that evaluates shipping operations based on the amount of goods and materials shipped using SmartWay carriers.

The Shipper/Logistics model (S/LM, which is part of FLEET) allows participating facilities to calculate emissions from the entire range of its transport operations—including trucking companies, rail services, transportation equipment, and from trucks idling at the loading docks. With an easy-to-use interface, S/LM produces a SmartWay





*A SmartWay-certified truck carrier parked at DMMI's loading docks.*

score based on transportation data entered by the facility, enabling facilities to understand how fuel savings translate into emission reductions and measurable environmental improvements.

SmartWay scores are generated from a weighted average of the number of certified carriers employed and overall efficiency improvements related to transportation operations. An optional emissions footprint score helps companies determine the amount of emissions they generate from the use of transportation resources, which can include hired freight services (e.g., trucks and rail); idling from trucks at facilities; and equipment such as forklifts, loaders, and generators. At a minimum, a shipper can calculate greenhouse gas emissions, along with particulate matter and NO<sub>x</sub> emissions depending on the availability of emissions factors from shippers.

## IMPLEMENTING A SMARTWAY ACTION PLAN AT DMMI

EPA provides technical assistance to help facilities quantify emissions, and can assist in identifying certified carriers in a facility's region to help it meet fuel-efficiency goals. The FLEET tool and other information resources are available on the SmartWay website to help shippers track progress toward transportation emission-reduction goals.

Upon joining the program, shippers develop an action plan based on a set of goals that are achievable over a period of three years from the start date of membership. DMMI's action plan begins with a commitment to promote company and corporate awareness of SmartWay throughout the DENSO network of facilities, followed by efforts to notify carriers about the partnership and offering to give them a presentation outlining how the SmartWay program works. Site impact reductions at DMMI have focused on improving carrier mileage tracking systems and inputting data for footprint evaluation and benchmarking.

Examples of other SmartWay Action Plan goals include:

- ★ Converting from diesel to electric forklifts at all facilities to improve efficiency and ambient air quality in and around freight docking areas.
- ★ Contacting DENSO carriers to tell them about SmartWay and incorporating partnership status into the contract bidding process with preference or points given to partner carriers.
- ★ Using intermodal operations, which combines the fuel efficiency of rail with the logistical advantages of trucking.
- ★ Labeling boxes and packages of company products that are carried by SmartWay Transport Carrier Partners.
- ★ Improving pickup/delivery and truckload scheduling with freight logistics software that helps to plan delivery times and shipping loads.
- ★ Upgrading the light-duty fleet with more fuel-efficient and lower-emitting vehicles.

## BENEFITS

Participating in the SmartWay Partnership provides clear environmental and business advantages while helping facilities improve their emissions-tracking capabilities. Working together, DMMI and its carrier partners have reduced:

- ★ Fuel consumption from trucks and rail delivering freight
- ★ Operating costs associated with freight delivery (improved logistics)
- ★ Emissions of CO<sub>2</sub>
- ★ Emissions of NO<sub>x</sub>, particulate matter, and air toxics

By 2012, SmartWay partners will help save between 3.3 and 6.6 billion gallons of diesel fuel per year, avoiding at least 33 million metric tons of carbon dioxide emissions and up to 200,000 tons of NO<sub>x</sub> emissions per year.<sup>1</sup> From a business angle, DMMI believes it is important to work with carriers that share the SmartWay approach. Mike Myszka from DMMI emphasizes this synergy of business and environmental benefit: "When carriers combine an environmental conscience with economic savvy, we all win in the end."

## RESOURCES FOR MORE INFORMATION

- ★ EPA SmartWay Transport Partnership [<http://www.epa.gov/smartway/>] provides an overview of the program and links to a member database and the FLEET tool.
- ★ DOE's Vehicle Technologies Program [<http://www1.eere.energy.gov/vehiclesandfuels/index.html>] works on research and development of energy-efficient and environmentally friendly transportation technologies.

<sup>1</sup> <http://www.epa.gov/orcdizux/smartway/transport-partner-resources/resources-faq.htm>